NEW MEXICO
ENVIRONMENT DEPARTMENT

Harold Runnels Building
1190 Saint Francis Drive, PO Box 5469
Santa Fe, NM 87502-5469
Telephone (505) 827-2855
www.env.nm.gov

Michelle Lujan Grisham
Governor

Howie C. Morales
Lt. Governor

James C. Kenney
Cabinet Secretary

Jennifer J. Pruett
Deputy Secretary

Certified Mail-Return Receipt Requested

March 8, 2019

Mr. Bob Detweiler, President
Oshara Mutual Domestic Wastewater Association
11 Craftsman Road, Oshara Village
Santa Fe, New Mexico 87507

RE: Oshara Village Water Reclamation Facility; Minor Facility; NPDES Permit No. NM0030813; NPDES Compliance Evaluation Inspection; February 21, 2019

Dear Mr. Detweiler:

Enclosed please find a copy of the report and check list for the referenced inspection that the New Mexico Environment Department (NMED) conducted at your facility on behalf of the U. S. Environmental Protection Agency (USEPA). This inspection report will be sent to the USEPA in Dallas for their review. These inspections are used by USEPA to determine compliance with the National Pollutant Discharge Elimination System (NPDES) permitting program in accordance with the requirements of the federal Clean Water Act.

Further explanations are provided with the check list and discuss issues that should be addressed. The introduction and treatment scheme are also included with this inspection report.

You are encouraged to review the inspection report, required to correct any issues noted during the inspection, and advised to modify your operation and/or administrative procedures as appropriate. If you have comments on or concerns with the basis for the findings in the NMED inspection report, please contact us (see address below) in writing within 30 days from the date of this letter. Further, you are encouraged to notify in writing USEPA and NMED regarding modifications and compliance schedules at the address below:

David Long, NPDES Enforcement Coordinator
Environmental Protection Agency, Region 6
NPDES Enforcement Branch (6EN-WM
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Sarah Holcomb, Program Manager
New Mexico Environment Dept.
Surface Water Quality Bureau
Point Source Regulation Section
PO Box 5469
Santa Fe, New Mexico 87502

David Long (Long.David@epa.gov) is USEPA Region 6's NPDES Enforcement Coordinator at the above address. If you have any questions about this inspection report, please contact Sandra Gabaldon at 505-827-1041 or Sandra.gabaldon@state.nm.us

Sincerely,

/s/ Sarah Holcomb

Sarah Holcomb, Program Manager
Point Source Regulation Section
Surface Water Quality Bureau

Cc: Carol Peters-Wagnon, USEPA (6EN-WM via email
David Long, USEPA (6EN-WM) via email
Nancy Williams, USEPA (6EN-WC) via email
Amy Andrews, USEPA (6EN-WM) via email
David Esparza, USEPA (6EN-WM) via email
Brent Larson, USEPA (6WQ-PP) via email
Robert Italiano, NMED District II via email

Loren Allen, Contract Operator via email

Form Approved
OMB No. 2040-0003
Approval Expires 7-31-85

NPDES Compliance Inspection Report

Section A: National Data System Coding

1	2	3	NPDES	yr/mo/day	18	19	20
Transaction Code					Inspec. Type	Inspector	Fac Type
	N	5	NM0003081 3	190221	C	S	1

M	I	N	O	R																					

67			69	70	71	72	73	74	75	
Inspection Work Days				Facility Evaluation Rating	BI	QA	----------Reserved----------			
		1		2	N	N				80

Section B: Facility Data

Name and Location of Facility Inspected *(For industrial users discharging to POTW, also include POTW name and NPDES permit number)*	Entry Time /Date	Permit Effective Date
OSHARA VILLAGE WATER RECLAMATION FACILITY No. 2 Willow Back Road Santa Fe, NM 87508 SANTA FE COUNTY	1230 Hours / February 21, 2019	September 1, 2017
	Exit Time/Date	Permit Expiration Date
	1400 Hours / February 21, 2019	August 30, 2022

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)	Other Facility Data
Loren Allen; Allen Environmental, LLC; Contract Operator (505) 6902002	35°36'35.65" N -106°59'55.40" W
Name, Address of Responsible Official/Title/Phone and Fax Number Oshara Village Mutual Domestic Wastewater Association Bob Detwiler, President (505) 629-4767	Contacted Yes [ ] No [*] SIC 4952

Section C: Areas Evaluated During Inspection

(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

S	**Permit**	U	**Flow Measurement**	M	**Operations & Maintenance**	N	**CSO/SSO**
U	**Records/Reports**	S	**Self-Monitoring Program**	S	**Sludge Handling/Disposal**	N	**Pollution Prevention**
S	**Facility Site Review**	N	**Compliance Schedules**	N	**Pretreatment**	N	**Multimedia**
S	**Effluent/Receiving Waters**	U	**Laboratory**	N	**Storm Water**	N	**Other:**

Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

Please see checklist and further explanations for details of findings

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Telephone/Fax	Date
Sandra Gabaldon ***/s/ Sandra Gabaldon***	**NMED/SWQB/(505) 827-1041/(505) 827-0160**	**March 8, 2019**
Signature of Management QA Reviewer ***/s/ Sarah Holcomb*** **Sarah Holcomb, Program Manager**	**Agency/Office/Phone and Fax Numbers** **NMED/SWQB/((505) 827-2798/(505) 827-0160**	**Date** **March 8, 2019**

OSHARA VILLAGE WATER RECLAMATION FACILITY	PERMIT NO. NM0030813

SECTION A – PERMIT VERIFICATION

PERMIT SATISFACTORILY ADDRESSES OBSERVATIONS ☒ S ☐ M ☐ U ☐ NA (*FURTHER EXPLANATION ATTACHED NO)*

DETAILS:

1. CORRECT NAME AND MAILING ADDRESS OF PERMITTEE	☒ Y ☐ N ☐ NA
2. NOTIFICATION GIVEN TO EPA/STATE OF NEW DIFFERENT OR INCREASED DISCHARGES	☐ Y ☐ N ☒ NA
3. NUMBER AND LOCATION OF DISCHARGE POINTS AS DESCRIBED IN PERMIT	☒ Y ☐ N ☐ NA
4. ALL DISCHARGES ARE PERMITTED	☒ Y ☐ N ☐ NA

SECTION B – RECORDKEEPING AND REPORTING EVALUATION

RECORDS AND REPORTS MAINTAINED AS REQUIRED BY PERMIT. ☐ S ☐ M ☒ U ☐ NA (*FURTHER EXPLANATION ATTACHED YES)*

DETAILS:

1. ANALYTICAL RESULTS CONSISTENT WITH DATA REPORTED ON DMRs.	☐Y ☒ N ☐ NA
2. SAMPLING AND ANALYSES DATA ADEQUATE AND INCLUDE.	☐S ☐ M ☒ U ☐ NA
a) DATES, TIME(S) AND LOCATION(S) OF SAMPLING	☐ Y ☒ N ☐ NA
b) NAME OF INDIVIDUAL PERFORMING SAMPLING	☒ Y ☐ N ☐ NA
c) ANALYTICAL METHODS AND TECHNIQUES.	☐ Y ☒ N ☐ NA
d) RESULTS OF ANALYSES AND CALIBRATIONS.	☐ Y ☒ N ☐ NA
e) DATES AND TIMES OF ANALYSES.	☒ Y ☐ N ☐ NA
f) NAME OF PERSON(S) PERFORMING ANALYSES.	☒ Y ☐ N ☐ NA
3. LABORATORY EQUIPMENT CALIBRATION AND MAINTENANCE RECORDS ADEQUATE.	☒ S ☐ M ☐ U ☐ NA
4. PLANT RECORDS INCLUDE SCHEDULES, DATES OF EQUIPMENT MAINTENANCE AND REPAIR.	☒ S ☐ M ☐ U ☐ NA
5. EFFLUENT LOADINGS CALCULATED USING DAILY EFFLUENT FLOW AND DAILY ANALYTICAL DATA.	☒ Y ☐ N ☐ NA

SECTION C – OPERATIONS AND MAINTENANCE

TREATMENT FACILITY PROPERLY OPERATED AND MAINTAINED. ☐ S ☒ M ☐ U ☐ NA *(FURTHER EXPLANATION ATTACHED YES)*

DETAILS:

1. TREATMENT UNITS PROPERLY OPERATED.	☒ S ☐ M ☐ U ☐ NA
2. TREATMENT UNITS PROPERLY MAINTAINED.	☒ S ☐ M ☐U ☐ NA
3. STANDBY POWER OR OTHER EQUIVALENT PROVIDED .	☒ S ☐ M ☐ U ☐ NA
4. ADEQUATE ALARM SYSTEM FOR POWER OR EQUIPMENT FAILURES AVAILABLE.	☒ S ☐ M ☐ U ☐ NA
5. ALL NEEDED TREATMENT UNITS IN SERVICE	☒ S ☐ M ☐ U ☐ NA
6. ADEQUATE NUMBER OF QUALIFIED OPERATORS PROVIDED.	☐ S ☒ M ☐U ☐ NA
7. SPARE PARTS AND SUPPLIES INVENTORY MAINTAINED.	☒ S ☐ M ☐ U ☐ NA
8. OPERATION AND MAINTENANCE MANUAL AVAILABLE.	☒ Y ☐ N ☐ NA
STANDARD OPERATING PROCEDURES AND SCHEDULES ESTABLISHED.	☒ Y ☐ N ☐ NA
PROCEDURES FOR EMERGENCY TREATMENT CONTROL ESTABLISHED.	☐Y ☒ N ☐ NA

OSHARA VILLAGE WATER RECLAMATION FACILITY	PERMIT NO. NM0030813

SECTION C – OPERATIONS AND MAINTENANCE (CONT'D)

9. HAVE BYPASSES/OVERFLOWS OCCURRED AT THE PLANT OR IN THE COLLECTION SYSTEM IN THE LAST YEAR?	☐ Y ☒ N ☐ NA
IF SO, HAS THE REGULATORY AGENCY BEEN NOTIFIED?	☐ Y ☐ N ☒ NA
HAS CORRECTIVE ACTION BEEN TAKEN TO PREVENT ADDITIONAL BYPASSES/OVERFLOWS?	☐Y ☐ N ☒ NA
10.HAVE ANY HYDRAULIC OVERLOADS OCCURRED AT THE TREATMENT PLANT?	☐ Y ☒ N ☐ NA
IF SO, DID PERMIT VIOLATIONS OCCUR AS A RESULT?	☐ Y ☐ N ☒ NA

SECTION D – SELF-MONITORING

PERMITTEE SELF-MONITORING MEETS PERMIT REQUIREMENTS. ☒ S ☐ M ☐ U ☐ NA *(FURTHER EXPLANATION ATTACHED NO).*
DETAILS:

1. SAMPLES TAKEN AT SITE(S) SPECIFIED IN PERMIT.	☒ Y ☐ N ☐ NA
2. LOCATIONS ADEQUATE FOR REPRESENTATIVE SAMPLES.	☒ Y ☐ N ☐ NA
3. FLOW PROPORTIONED SAMPLES OBTAINED WHEN REQUIRED BY PERMIT.	☐ Y ☐ N ☒ NA
4. SAMPLING AND ANALYSES COMPLETED ON PARAMETERS SPECIFIED IN PERMIT.	☒ Y ☐ N ☐ NA
5. SAMPLING AND ANALYSES PERFORMED AT FREQUENCY SPECIFIED IN PERMIT.	☒Y ☐ N ☐ NA
6. SAMPLE COLLECTION PROCEDURES ADEQUATE	☒ Y ☐ N ☐ NA
a) SAMPLES REFRIGERATED DURING COMPOSITING.	☒ Y ☐ N ☐ NA
b) PROPER PRESERVATION TECHNIQUES USED.	☒ Y ☐ N ☐ NA
c) CONTAINERS AND SAMPLE HOLDING TIMES CONFORM TO 40 CFR 136.3.	☒ Y ☐ N ☐ NA
7. IF MONITORING AND ANALYSES ARE PERFORMED MORE OFTEN THAN REQUIRED BY PERMIT, ARE THE RESULTS REPORTED IN PERMITTEE'S SELF-MONITORING REPORT?	☐ Y ☐ N ☒ NA

SECTION E – FLOW MEASUREMENT

PERMITTEE FLOW MEASUREMENT MEETS PERMIT REQUIREMENTS. ☐ S ☐ M ☒ U ☐ NA *(FURTHER EXPLANATION ATTACHED YES)*
DETAILS:

1. PRIMARY FLOW MEASUREMENT DEVICE PROPERLY INSTALLED AND MAINTAINED. TYPE OF DEVICE: Parshall Flume	☒Y ☐ N ☐ NA
2. FLOW MEASURED AT EACH OUTFALL AS REQUIRED.	☒ Y ☐ N ☐ NA
3. SECONDARY INSTRUMENTS (TOTALIZERS, RECORDERS, ETC.) PROPERLY OPERATED AND MAINTAINED.	☒ Y ☐ N ☐ NA
4. CALIBRATION FREQUENCY ADEQUATE.	☐Y ☒ N ☐ NA
RECORDS MAINTAINED OF CALIBRATION PROCEDURES.	☐ Y ☒ N ☐ NA
CALIBRATION CHECKS DONE TO ASSURE CONTINUED COMPLIANCE.	☐ Y ☒ N ☐ NA
5. FLOW ENTERING DEVICE WELL DISTRIBUTED ACROSS THE CHANNEL AND FREE OF TURBULENCE.	☒ Y ☐ N ☐ NA
6. HEAD MEASURED AT PROPER LOCATION.	☒ Y ☐ N ☐ NA
7. FLOW MEASUREMENT EQUIPMENT ADEQUATE TO HANDLE EXPECTED RANGE OF FLOW RATES.	☒ Y ☐ N ☐ NA

SECTION F – LABORATORY

PERMITTEE LABORATORY PROCEDURES MEET PERMIT REQUIREMENTS. ☐ S ☐ M ☒ U ☐ NA *(FURTHER EXPLANATION ATTACHED YES)*
DETAILS:

1. EPA APPROVED ANALYTICAL PROCEDURES USED *(40 CFR 136.3 FOR LIQUIDS, 503.8(b) FOR SLUDGES)*	☐ Y ☒ N ☐ NA

OSHARA VILLAGE WATER RECLAMATION FACILITY	PERMIT NO. NM0030813

SECTION F - LABORATORY (CONT'D)

2. IF ALTERNATIVE ANALYTICAL PROCEDURES ARE USED, PROPER APPROVAL HAS BEEN OBTAINED ☐ Y ☐ N ☒ NA

3. SATISFACTORY CALIBRATION AND MAINTENANCE OF INSTRUMENTS AND EQUIPMENT. ☒ S ☐ M ☐ U ☐ NA

4. QUALITY CONTROL PROCEDURES ADEQUATE. ☐ S ☐ M ☒ U ☐ NA

5. DUPLICATE SAMPLES ARE ANALYZED. 0 % OF THE TIME. ☐ Y ☒ N ☐ NA

6. SPIKED SAMPLES ARE ANALYZED. 0 % OF THE TIME. ☐ Y ☒ N ☐ NA

7. COMMERCIAL LABORATORY USED. ☒ Y ☐ N ☐ NA

LAB NAME Hall Environmental Analysis Laboratory — Sage ATC Environmental Consulting

LAB ADDRESS 4901 Hawkins, NE; Albuquerque, NM 87109 — 832 NW 67th Street; Oklahoma City, OK 73116

PARAMETERS PERFORMED: BOD, TSS, E. Coli — Biomonitoring (WET)

SECTION G - EFFLUENT/RECEIVING WATERS OBSERVATIONS. ☐ S ☐ M ☐ U ☐ NA *(FURTHER EXPLANATION ATTACHED NO).No Discharge occurring at the time of inspection*

OUTFALL NO.	OIL SHEEN	GREASE	TURBIDITY	VISIBLE FOAM	FLOAT SOL.	COLOR	OTHER
001	N/A	N/A	N/A	N/A	N/A	N/A	N/A

RECEIVING WATER OBSERVATIONS Receiving water had a slightly milky white color

SECTION H - SLUDGE DISPOSAL

SLUDGE DISPOSAL MEETS PERMIT REQUIREMENTS. ☒ S ☐ M ☐ U ☐ NA *(FURTHER EXPLANATION ATTACHED NO).*
DETAILS: Sludge is removed through septic haulers and taken to either Pojoaque Pueblo or City of Santa Fe WWTP.

1. SLUDGE MANAGEMENT ADEQUATE TO MAINTAIN EFFLUENT QUALITY. ☒ S ☐ M ☐ U ☐ NA

2. SLUDGE RECORDS MAINTAINED AS REQUIRED BY 40 CFR 503. ☐ S ☐ M ☐ U ☒ NA

3. FOR LAND APPLIED SLUDGE, TYPE OF LAND APPLIED TO: N/A (e.g., FOREST, AGRICULTURAL, PUBLIC CONTACT SITE)

SECTION I - SAMPLING INSPECTION PROCEDURES *(FURTHER EXPLANATION ATTACHED ___).*

1. SAMPLES OBTAINED THIS INSPECTION. ☐ Y ☐ N ☒ NA

2. TYPE OF SAMPLE OBTAINED

GRAB _____ COMPOSITE SAMPLE ___ METHOD _____ FREQUENCY

3. SAMPLES PRESERVED. ☐ Y ☐ N ☐ NA

4. FLOW PROPORTIONED SAMPLES OBTAINED. ☐ Y ☐ N ☐ NA

5. SAMPLE OBTAINED FROM FACILITY'S SAMPLING DEVICE. ☐ Y ☐ N ☐ NA

6. SAMPLE REPRESENTATIVE OF VOLUME AND MATURE OF DISCHARGE. ☐ Y ☐ N ☐ NA

7. SAMPLE SPLIT WITH PERMITTEE. ☐ Y ☐ N ☐ NA

8. CHAIN-OF-CUSTODY PROCEDURES EMPLOYED. ☐ Y ☐ N ☐ NA

9. SAMPLES COLLECTED IN ACCORDANCE WITH PERMIT. ☐ Y ☐ N ☐ NA

OSHARA VILLAGE WATER RECLAMATION FACILITY
NPDES Permit No. NM0030813
NPDES Compliance Evaluation Inspection
Date of Inspection: February 21, 2019

Introduction:

On February 21, 2019, Sandra Gabaldón and Daniel Valenta of the New Mexico Environment Department (NMED), Surface Water Quality Bureau (SWQB) conducted a Compliance Evaluation Inspection (CEI) at the Oshara Village Water Reclamation Facility (WRF). The Oshara Village WRF has a design flow capacity of 0.03 MGD (million gallons per day) and is classified as a minor discharger under the Federal Clean Water Act, Section 402, of the National Pollutant Discharge Elimination System (NPDES) permit program. It is assigned NPDES permit number NM0030813. This permit regulates the WRF discharge to an unnamed arroyo in NMAC segment 20.6.4.98 of the Rio Grande Basin. This segment includes the designated uses of livestock watering, wildlife habitat, marginal warmwater aquatic life and primary contact.

The NMED performs a certain number of CEIs for the U.S. Environmental Protection Agency (USEPA), Region VI, under the NPDES permit program, in accordance with the Federal Clean Water Act. USEPA uses these inspections to determine compliance with the NPDES permit program. This inspection report is based on information provided by the permittee's representatives, observations made by the NMED inspectors, and records and reports kept by the permittee and/or NMED.

Upon arrival at the WRF at 1230 hours on February 21,2019, Ms. Gabaldón conducted an entrance interview with Mr. Loren Allen, (NM Certified Level IV). Ms. Gabaldón presented her credentials and explained the purpose of the inspection. Mr. Allen conducted a tour of the facility. An exit interview was conducted with Mr. Allen at the facility at approximately 1345 hours on February 21, 2019 to present the preliminary findings of the inspection. Mr. Allen provided benchsheets, flow documentation and calibration for all parameters either done by himself or a contract laboratory.

Treatment Scheme:

The facility is a Sequencing Batch Reactor (SBR). The system consists of one lift station that brings raw influent from approximately 50 houses in the Oshara Village to the Water Reclamation Facility.

Flow then travels to an approximately 12" wide barscreen with 1" openings to catch large rags and debris.

From the headworks, influent travels into the conditioning sludge storage tank. Influent then travels into an anoxic equalization tank. Two pumps then transfer the influent to the Sequencing Batch Reactor which has an aspirating aerator that provides oxygen to the system. Each cycle of treatment consists of fill/react, interact/react, settle and decant. The phases of treatment are controlled by a PLC (Programmable Logic Controller), which the operator can adjust manually to provide optimum treatment phases.

Disinfection of the wastewater is achieved through a chlorine contact tank. Sodium hypochloride is dosed into the decant pipe during the decant phase, then it is dechlorinated with sodium thiosulfate before entering the unnamed arroyo.

The effluent is metered by an ultrasonic flow meter. There is a primary Palmer Bowles Flume as well. The effluent enters the Arroyo Hondo through a 10” closed pipe with a rip rap area below the pipe to eliminate erosion and provide velocity dissipation.

OSHARA VILLAGE WATER RECLAMATION FACILITY
NPDES Permit No. NM0030813
NPDES Compliance Evaluation Inspection
Date of Inspection: February 21, 2019

Further Explanations:

Note: The sections are arranged according to the format of the enclosed EPA Inspection Checklist (Form 3560-3), rather than being ranked in order of importance.

Section B – Recordkeeping and Reporting Evaluation – Overall Rating of "Unsatisfactory".

Permit Requirements for Recordkeeping and Reporting:

Part I – Requirements for NPDES permitting, A. Limitations and Monitoring Requirements state:

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS Standard Units		MONITORING REQUIREMENTS	
POLLUTANT	STORET CODE	MINIMUM	MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
PH	00400	6.6	9.0	5 /Week	Grab

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS						MONITORING REQUIREMENTS	
		lbs/day, unless noted		mg/l, unless noted					
POLLUTANT	STORET CODE	30-DAY AVG	7-DAY AVG	30-DAY AVG	7-DAY AVG	Percent Removal (*1)	DAILY MAX	MEASURE FREQUENCY	SAMPLE TYPE
Flow	50050	Report GPD	Report GPD	N/A	N/A	N/A	N/A	Continuous	Flow Meter
Biochemical Oxygen	00310	7.51	11.27	30	45	85% min	N/A	Once/Month	Grab
Demand, 5-day									
Total Suspended Solids	00530	7.51	11.27	30	45	85% min	N/A	Once/Month	Grab
Total Residual Chlorine	50060	N/A	N/A	N/A	N/A	N/A	11 µg/l	5 /Week	Grab
E. coli Bacteria	51040	N/A	N/A	206	N/A	N/A	940	Once/Month	Grab

Whole Effluent Toxicity Testing				
Daphnia pulex	30-Day Avg	48-Hr Minimum	Measurement Frequency	Sample Type
	Report	Report	Once/Term (*6)	24-Hr. Composite

*6 Once per permit term. The test shall take place between November 1 and April 30 during the first year of the permit term.

40 CFR 127.16:

Implementation of electronic reporting requirements for NPDES permittees, facilities, and entities subject to this part (a) Scope and schedule. NPDES permittees, facilities, and entities subject to this part except for those covered by waivers under §§ 127.15 and 127.24, must electronically submit the following NPDES information (reports, notices, waivers, and certifications) after the start dates listed in Table 1 of this section.

NPDES information	Start dates for electronic submissions
Discharge Monitoring Reports [40 CFR 122.41(l)(4)]	**December 21, 2016.**

The permit requires, in part III.C.4, Records Contents:

Records of monitoring information shall include:
a. The date, exact place, and time of sampling or measurements;
b. The individual(s) who performed the sampling or measurements;
c. The date(s) and time(s) analyses were performed;
d. The individual(s) who performed the analyses;
e. The analytical techniques or methods used; and
f. The results of such analyses.

Findings for Recordkeeping and Reporting:

The permittee has failed to submit Discharge Monitoring Reports (DMRs) electronically to EPA and continues to submit paper DMRs without a waiver. The permittee was instructed on the next internet training for the NetDMR system.

The analytical techniques or methods used are not on the in-house benchsheets for TRC or pH. They also do not provide the exact place of sampling.

The permittee provided bench sheets for several months in 2018 and included January 2019. The following issues were seen with those bench sheets provided:

- The permittee uses a contract laboratory for Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), and Escherichia coli (E. coli). Analysis of pH and Total Residual Chlorine (TRC) are done on site and performed by the permittee.

- The permittee analyses E. coli once per month. On the DMR for June 2018, the permittee stated the daily max was 2.33 and the 30-day average was 8.43. It is unclear to NMED how the permittee derived these numbers. The bench sheet from Hall Environmental shows the results as two (2) mpn/100 mL.
- The signature on the June 2018 DMR is Tai Bixby. It is unclear who this individual is. The previous signatory for DMRs was Alan Hoffman. No records were provided that showed a change in signatory was done either with EPA or NMED.
- TSS was reported as zero on the DMR. However, the PQL on the bench sheet is 4.0 mg/L. The permittee should be submitting the PQL rather than zero. All calculations for loading are incorrect and should be corrected and re-submitted to EPA as soon as possible.

December 2018

- The DO depletion for BOD was greater than 0.20 mg/L in the blanks. The laboratory needs to obtain satisfactory water by improving purification or use a water from another source. The permittee failed to report this issue on their DMR.
- Hall Environmental uses SM5210B for BOD. For Standard Methods 21st Edition, requires that the laboratory provides the length of storage and temperature with the analytical results.

In-House (pH and TRC)

- The permittee does not provide the analytical method being used for either pH or TRC.
- Calibration for pH, according to Standard Methods 21st Edition, 4500-H^+, states "Perform initial calibration with a minimum of three concentrations of standards for linear curves." The permittee provided calibration records for pH but does not provide any calibration results. Rather, the permittee provides a check mark stating that the buffer was used. Standard Methods further states: "Use a pH meter accurate and reproducible to 0.1 pH units with a range of 0 to 14 and equipped with a temperature-compensation adjustment. The permittee should provide calibration results on the bench sheet to verify that the pH meter is accurate and reproducible to 0.1 pH units.
- Standard Methods, 4500-Cl DPD Colorimetric Method requires calibration of the photometric equipment with chlorine or potassium permanganate solutions. No calibration records were provided by the permittee.
- When performing colorimetric procedures, Standard Methods 21st Edition states, "compensate for color and turbidity by using a color and turbidity blank." There is no indication the permittee does blank samples.
- The Hach instrumentation for TRC provides standardized samples to ensure the instrumentation is reading the samples correctly. There is no indication that the permittee is running any standardized testing.

Section C – Operations and Maintenance – Overall Rating "Marginal":

The permit requires, in Part III.B.3.a, Proper Operation and Maintenance:

a. *The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by permittee as efficiently as possible and in a manner, which will minimize upsets and discharges of excessive pollutants and will achieve compliance with the conditions of this permit. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This provision requires that operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of this permit.*

b. *The permittee shall provide an adequate operating staff which is duly qualified to carry out operation, maintenance and testing functions required to insure compliance with the conditions of this permit.*

The permit requires, in Part II.E Pollution Prevention Requirements:

The permittee shall institute a program within 12 months of the effective date of the permit (or continue an existing one) directed towards optimizing the efficiency and extending the useful life of the facility. The permittee shall consider the following items in the program:

(a) The influent loadings, flow and design capacity;
(b) The effluent quality and plant performance;
(c) The age and expected life of the wastewater treatment facility's equipment;
(d) Bypasses and overflows of the tributary sewerage system and treatment works;
(e) New developments at the facility;
(f) Operator certification and training plans and status;
(g) The financial status of the facility;
(h) Preventive maintenance programs and equipment conditions and;
(i) An overall evaluation of the conditions of the facility.

Findings for Operation and Maintenance:

The permittee has not instituted a program within 12 months of the effective date of the permit directed towards optimizing the efficiency and extending the useful life of the facility. The permit was issued in 2017.

It is recommended that a second certified operator be staffed at this facility if the primary operator is on vacation or becomes ill. There is only one certified operator. Only well-trained, competent operators can be expected to perform adequate operation, repairs, and preventive maintenance. Wastewater facility maintenance is complex and requires a variety of skills.

The facility has no written emergency plan in place. At all times, the facility should follow safe operating procedures. Employees must be trained in emergency shut-down, fire control, and spill response procedures, as well as in the use of safety equipment, safe sampling techniques, and safe handling of chemicals and wastes.

Section E – Flow Measurement – Overall Rating "Unsatisfactory"

In Part III.C.6 – Flow Measurements:

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements is consist with accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10% from true discharge rates throughout the range of expected discharge volumes.

Findings for Flow Measurement:

The permittee did not provide calibration documentation of the last year.

The permittee did not provide documentation of any calibration checks performed in the interim.

Section F – Laboratory – Overall Rating of "Marginal"

Permit requirements in Part III, Section C.5. Monitoring Procedures:

a. Monitoring must be conducted according to test procedures approved under 40 CFR 136, unless other tests procedures have been specified in this permit or approved by the Regional Administrator.

b. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instruments at intervals frequent enough to insure accuracy of measurements and shall maintain appropriate records of such activities.

c. An adequate analytical quality control program, including the analysis of sufficient standards, spikes and duplicate samples to insure the accuracy of all requirements and analytical results shall be maintained by the permittee or designated commercial laboratory.

Findings for Laboratory:

The permittee did not specify on the benchsheets for pH and TRC which analytical method was being used. It is not clear if they are approved under 40 CFR 136.

The permittee is not doing duplicate sampling. The precision of laboratory findings refers to the reproducibility or degree of agreement among replicate measurements of the same quantity. The closer the numerical values of the measurements come to each other, the more precise are the measurements. In a laboratory QC program, precision is determined by the analysis of actual samples in duplicate. Every tenth sample should be a duplicate to ensure the permittee is doing their 10% duplicate sampling.